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BIBEAU(10) **Pub. No.: US 2016/0213078 A1**(43) **Pub. Date: Jul. 28, 2016**(54) **INSULATING GARMENT FOR FIREFIGHTER
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ABSTRACT

An insulating garment for use as thermal and moist repellent barrier in a firefighter bunker gear is disclosed, the garment being adapted to be worn by a firefighter under a bunker gear. The garment being made from a fire-resistant insulating fabric comprising: a first woven or knitted fire-resistant fabric layer; a second woven or knitted fire-resistant fabric layer; and at least one monofilament yarn interconnecting the first and second layers, thereby creating an insulating space between the layers. Each monofilament yarn is made of a material having a compressive strength from about 0.5 to about 2.5 cN·cm/cm² and a resilience superiors or equals to about 25% to maintain the insulating space between the layers and therefore thermal and moist insulation. Preferably, the material further has a high melting point and/or high transition temperatures. The material of the monofilament yarn may comprise polyphenylene sulphide (PPS), polyetheretherketone (PEEK) or Polyetherimide (ULTEM™).

